

METHOD AND SYSTEM FOR RECOVERING INFORMATION FROM A
MAGNETIC FIELD SIGNAL USABLE FOR LOCATING AN
UNDERGROUND OBJECT

ABSTRACT OF THE DISCLOSURE

A data recovery subsystem for use in a receive system configured to receive a magnetic field signal, the magnetic field signal including a carrier component usable for locating an underground object and at least one modulation sideband. The data recovery subsystem includes a first mixer to mix a Radio Frequency (RF) signal with a first Local Oscillator (LO) signal to produce an Intermediate Frequency (IF) signal representative of the magnetic field signal. A Phase Locked Loop (PLL) phase-locks a second LO signal to an IF carrier component of the IF signal. A second mixer synchronously mixes the IF signal with the second LO signal to produce a baseband signal including a demodulated sideband.

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